



## **Neal Smith National Wildlife Refuge**

School visits to the Prairie Learning Center (PLC):

**Mission:** Study Neal Smith NWR and use the Iowa prairie ecosystem as an integrating and motivating context in each related curricular area to engage school children at all grade levels in real world, field-based learning experiences.

**Goals:**

All student visits and developing school partnerships will include:

1. A search for *wonder*
2. Nature journals
3. A place-based curriculum, focused on studying the land and wildlife at Neal Smith NWR, while highlighting global connections when appropriate
4. Integrated Phenology study, tracking changes overtime
5. Studying and modeling past and present naturalists (e.g. Rachel Carson, Aldo Leopold, Byrd Baylor, Ernest Seton, Lewis and Clark) as a pathway to exploration
6. Inviting all school children, teachers, and chaperones to become naturalists, or people who always ask wonder questions and make discoveries about the environment
7. Developing the skills of critical thinking, problem solving, teamwork, stewardship, and citizenship
8. Connecting 1<sup>st</sup> American and early settlement history when appropriate

**Guiding principles:**

- The main subject of any school group visit to PLC should be the tallgrass prairie ecosystem. The prairie and the life in it should be the main focus of all activities.
- A minimum of materials and objects will be required for all activities; realizing that materials and equipment distract from field study.
- This document and enclosed lessons should be continually reviewed and adapted as Neal Smith NWR and environmental education evolve.



# Neal Smith National Wildlife Refuge

## Fall Units

"September offers proof that things aren't always what they seem to be in nature. That's what makes the out-of-doors so much fun." – Jim Hale

## Kindergarten:

### 1. [Prairie Explorers](#)

Objective: Students use their senses of sight, touch, hearing, and smell to explore the prairie.

A field leader asks students what they already know about senses and how senses might help them make discoveries outside. Next, students work in small groups to observe different colors, sounds, smells, and textures found during a prairie hike. Afterwards, students reflect and share their discoveries about the prairie.

### 2. [KWHL-What is a prairie?](#)

Objective: This is a student-led activity that puts learners in charge of answering the question, "What is a prairie?"

A field leader asks students what they already know about the prairie and records their answers. As an introduction to the prairie, a field leader reads the book [In the Tall, Tall Grass](#) by Denise Fleming. Afterwards, the field leader facilitates a hike and helps students investigate the answer to the question, "What is a prairie?" Students use detailed observations and field notes as evidence to communicate in their own words the definition of prairie.

### 3. [A Prairie Bug Hunt:](#)

Objective: Students conduct a simple invertebrate investigation.

With guidance from a field leader, students discuss the term insect and work toward a definition. Insects have 3 body parts, 6 legs and two antennae. Students sing a song based on the body parts of an insect. Following the discussion, students are divided into small groups and search outside for examples of insects. Using simple journals, students draw insects and record their discoveries. Afterwards, students come back inside and share their insect findings with one another.





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## Spring Units

*"There is something infinitely healing in the repeated refrains of nature- the assurance that dawn comes after night, and spring after the winter."- Rachel Carson*



## Kindergarten Grade:

### 1. What Do Birds Do on the Prairie?

Objective: Students investigate basic bird behavior on the refuge.

After reading If I Were a Bird by Gladys Conklin, students share what they already know about birds and bird behavior. Students predict which types of birds and bird behavior they will see on the prairie. Students are provided with simple data sheets that have pictures of bird behaviors (singing, flocking, flying, bathing, etc.). Students are asked what they think they will see birds do today in the prairie. As the field leader reviews the behaviors, students pretend they are birds and act them out. Next, students head out into the field and search for birds and observe their behavior. As students observe bird behaviors, field leaders use tally marks to record their observations on the data sheets. Afterwards, students share all the different types of birds and bird behaviors they found in the prairie. They compare their findings to their predictions.

### 2. Color Hunt:

Objective: Students conduct an investigation to see how many different colors they can find on the prairie. Students provide reasons why some colors may be more common than others.

This is a student-led activity that puts learners in charge of answering the question, "How many colors are in the prairie?" Students listen to the book, Planting a Rainbow by Lois Ehlert and sing a song about colors. Students make predictions as to how many different colors they think they can find in the prairie. Next, a field leader distributes pouches to each student. Students are divided into small groups and each group has a field leader. Groups head into the field and each time a student finds a color, a field leader removes a small square of paper of that color from a big bag and places the paper in the student's pouch. Afterwards, students empty their pouches and share all the colors they have found. Using an extended t-chart, students tally all the different colors they have gathered. They speculate why they may have found more of one color than another. They share any surprises or discoveries related to their search for colors on the prairie.

### 3. Where Do Prairie Animals Live?

Objective: Students learn about prairie animals (i.e. birds, burrowing animals, and insects) and their homes.

During a guided discussion, a field leader uses a T-chart to help the students compare prairie animals' homes and needs to their own homes and needs. This comparison enables students to realize that their own needs for food, shelter, space, air, and water are similar to prairie animals and all living things. Following the discussion, students search for and observe a common prairie animal in their habitat. Children use simple journals to record their discoveries about animal homes and later share them with the class.

